MARYLAND

WATER/WASTEWATER AGENCY RESPONSE NETWORK

(MDWARN)

WORKSHOP AND TABLETOP EXERCISE

AFTER ACTION REPORT

Washington Suburban Sanitary Commission (WSSC) Headquarters
Laurel, Maryland

April 30, 2013

Sponsored by: U.S. Environmental Protection Agency (EPA) and Maryland Water/Wastewater Agency Response Network (MDWARN)

Facilitated by: Horsley Witten Group, Inc.

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Executive Summary

On April 30, 2013, approximately 35 representatives from Maryland drinking water and wastewater utilities, Maryland Department of the Environment (MDE), Maryland Emergency Management Agency (MEMA), Maryland Rural Water Association (MRWA), U.S. Environmental Protection Agency (EPA), and representatives from cities and towns across the state participated in a day-long training event focused on emergency preparedness and response to incidents affecting the water sector.

The exercise design team (EDT) identified the following objectives for the Maryland Water/Wastewater Agency Response Network (MDWARN) event:

1. Involve MDWARN members and recruit new members.
2. Strengthen and refine the relationship between MDWARN and all levels of emergency management.
3. Discuss the resource request process.
4. Discuss communication and coordination during an incident.
5. Verify member contact information.

The MDWARN event consisted of water sector specific presentations in the morning and a facilitated tabletop exercise (TTX) in the afternoon. Immediately following the TTX, an improvement planning session was held to further discuss the key concepts raised during the event. A facilitated hotwash was then held to encourage comments from attendees regarding lessons learned from the training. The workshop and TTX were designed to provide participants with an opportunity to learn about the current capabilities of MDWARN, discuss resource management during an incident affecting the water sector, and identify the path forward to further develop MDWARN.

The well attended event succeeded in meeting the objectives set forth by the EDT. The Horsley Witten Group, Inc. (HW), an EPA contractor, will develop an Improvement Plan based on the recommendations and comments received during the event. The Improvement Plan will serve as a guide to further develop MDWARN. Both EPA and HW will be available to assist MDWARN as they work through the improvement planning process over the next nine months.

Introduction

EPA sponsored a one-day Maryland Water/Wastewater Agency Response Network (MDWARN) water sector emergency response training event hosted at the Washington Suburban Sanitary Commission (WSSC) Headquarters on April 30, 2013, in Laurel, Maryland. The event focused on water sector emergency preparedness and response, and consisted of water sector specific presentations, a facilitated TTX, and an improvement planning session.

The morning began with focused presentations on topics related to water sector preparedness and response. Representatives from public and private drinking water and wastewater utilities along with response partners from emergency management (EM), county and state agencies, private and nongovernmental agencies then engaged in a facilitated discussion-based exercise utilizing a tropical storm scenario. A total of 35 people, representing nearly 20 utilities and agencies, participated in the event. The TTX scenario was designed to promote a discussion of water sector preparedness for and in response to a tropical storm which directly impacts many towns in Maryland. The TTX concluded with an improvement planning session during which key issues were discussed in further detail in a small group setting. Finally, a hotwash was conducted during which players were asked to voice their number one lesson learned from the event. A summary of hotwash comments is provided on page 10. All exercise participants were asked to fill out an exercise evaluation at the conclusion of the training. Participants were also presented with a personalized certificate which indicated the training credit hours (TCHs) they earned for their attendance at the event. A summary of written evaluation comments is attached as part of Appendix A.   Refer to Appendix B for a complete list of participants.

Workshop and Exercise Objectives

The following objectives were established for this workshop and TTX by the exercise design team (EDT):

1. Involve MDWARN members and recruit new members.
2. Strengthen and refine the relationship between MDWARN and all levels of emergency management.
3. Discuss the resource request process.
4. Discuss communication and coordination during an incident.
5. Verify member contact information.

The EDT also determined the presentation topics and overall event agenda. The full agenda can be found in Appendix C. Descriptions of how the objectives were met are contained throughout this After Action Report (AAR) and summarized in the event objective summary on page 11.

Presentation Topics

The following presentations were given during the morning workshop:
- "Introduction to MDWARN" – Stephen Gerwin, Howard County Bureau of Utilities and MDWARN Chair
- "MRWA Overview" – Jack Bowen, Maryland Rural Water Association (MRWA)

- "MEMA and Emergency Response" – Brendan McCluskey, Maryland Emergency Management Agency (MEMA)
- "MDE Role in the State Emergency Operations Center" – Alan Williams, Maryland Department of the Environment (MDE)
- "Electrical Mutual Aid and Assistance" – Phil Vavala, PHI Service Company
- "La Plata: Recovery from a Natural Disaster" – Bill Eckman, Town of La Plata

Tabletop Exercise

The afternoon multiagency, multijurisdictional TTX was designed to bring together representatives from the water and public safety sectors for a facilitated discussion of the various roles and responsibilities during an incident affecting drinking water and wastewater systems. The overarching goals were to improve water utility preparedness and discuss the procedures for requesting and providing assistance through MDWARN.

Improvement Planning

At the conclusion of the TTX, participants were organized into small groups consisting of 5 – 6 members. Each group was given a discussion topic that related to an issue brought up during the event. Groups were asked to discuss their particular topic and to record their recommendations on easel paper provided by HW. Each group then selected a spokesperson to present their recommendations to the larger group. Participants were encouraged to comment on each small group presentation. HW took notes during the improvement planning session and collected each groups' notes for inclusion in the draft Improvement Plan.

Hotwash/Evaluation

A facilitated hotwash was held to provide an opportunity for participants to voice their own lessons learned and other key elements raised during the workshop and TTX. A summary of participant feedback, including comments and evaluation scores, is provided in Appendix A.

Workshop Overview

Participants arrived at 8:30 a.m. on April 30, 2013, for the MDWARN event. The morning workshop consisted of presentations and the afternoon consisted of a TTX. Gary Grey of WSSC and Will Keefer of HW provided opening remarks and welcomed everyone to the event. All of the participants introduced themselves to the other attendees.

Presentation Summary

Introduction to MDWARN

Steve Gerwin of the Howard County Bureau of Utilities, also the MDWARN Chair, provided an overview of MDWARN and the importance of being a signatory to a mutual aid agreement (MAA). Mr. Gerwin gave a brief history of the WARN initiative and discussed reasons why utilities in Maryland should consider joining MDWARN. Mr. Gerwin explained that MDWARN

is a mutual aid network of "utilities helping utilities" that is free and open for membership to all water sector utilities in the state. Providing assistance is strictly voluntary and no member is required to provide assistance under any circumstances. "Utility to utility" assistance provided during a declared disaster may be eligible for reimbursement if both utilities are signatories to a MAA, like MDWARN. MDWARN also establishes set reimbursement rates for both personnel and equipment. Mr. Gerwin also explained the MDWARN MAA and how MDWARN has typed member resources and listed them on the website (www.mdwarn.org). MDWARN members can log into the "member's only" portion of the website and download PDFs that list the resources that other members have added to the database. Mr. Gerwin plans to put the MDWARN presentation on the MDWARN website so all members can view it and share it with non-members if they have any questions. Finally, Mr. Gerwin passed around the current MDWARN contact list and asked that the members review and update their information.

MRWA Overview

Jack Bowen of MRWA provided an overview of the history, structure and assistance that can be provided to members. MRWA is funded through a variety of sources and has a small, but very experienced, team of circuit riders who make 35 – 40 visits a month to small systems. MRWA can provide a range of services including training, leak detection, water audits, and can even provide assistance in preparing Consumer Confidence Reports (CCRs). Maryland has diverse geography and weather, which means that there are multiple drinking water and wastewater technologies used throughout the state. MRWA assists nearly 94% of the 501 community water systems in Maryland that serve less than 10,000 customers. MRWA is a great source to advertise the benefits of MDWARN to smaller systems; however, not many smaller systems have joined MDWARN. This has been attributed to a lack of understanding about MDWARN and misconceptions about the voluntary nature of providing assistance. Small systems often assume that since they don't have equipment available to share that they can't bring anything to the table. However, most have very experienced personnel who could assist other utilities during an incident. A small system being a member of MDWARN opens it up to a much larger pool of resources and assistance if needed during an incident. MRWA benefits from a partnership with MDWARN because it only has a small staff and a lack of first responder compatible communications equipment. Both MRWA and MDWARN are interested in encouraging smaller systems to join MDWARN.

MEMA and Emergency Response

Brendan McCluskey of MEMA described the role of emergency management in Maryland. MEMA has a staff of about 60 personnel and is headquartered at the Camp Fretterd Military Reservation. Situational awareness across the state is provided through the Maryland Joint Operations Center (MJOC) and is the point of contact for federal, state, and local agencies and officials. MEMA also has a Regional Liaison Officer (RLO) program which acts as the link between state emergency management and local emergency management staff. During a major incident, the State Emergency Operations Center (SEOC) can be activated and up to 40 agencies can staff the facility to collaborate on response. Mr. McCluskey also explained how emergencies are managed in the state and discussed the Maryland Emergency Management Assistance Compact (MEMAC). In addition, Mr. McCluskey noted that MEMA would be very interested in

obtaining the locations of water and wastewater utilities in Maryland. During the discussion period after the presentation, both MDWARN and the water sector utilities represented expressed interest in being involved in statewide training exercises.

MDE Role in the State Emergency Operations Center (SEOC)

Alan Williams of the Maryland Department of the Environment (MDE) discussed the role of MDE in the SEOC. MDE is represented in the SEOC under Emergency Support Function (ESF) #10 – Oil and Hazardous Materials Response. After an oil spill, Mr. Williams will coordinate with the MDE Water Supply Program to make notifications to water intakes downstream from the spill. During the presentation, it was suggested that MDE could have access to the members section of the MDWARN website to notify other MDWARN members about water sector emergencies that are happening in the state.

Electrical Mutual Aid and Assistance

Phil Vavala of PHI Service Company (Pepco Holdings) discussed Electric Sector Restoration and Mutual Aid and Assistance. In Maryland, the PHI Service Company provides electrical and gas services to most of the Eastern Shore of Maryland, and to Prince Georges and Montgomery Counties. Both MDWARN and PHI have similar mission statements and objectives regarding mutual aid and assistance. Mr. Vavala explained that the electrical sector faces many of the same challenges as the water sector during an incident including safety of personnel, service restoration, collaboration with other utilities, and communication. Mr. Vavala explained that the first priority for the electrical sector after an incident is to stabilize the transmission lines and then restore power to homes and businesses. When restoring power to areas after an incident, the electrical sector works with EM to determine the restoration priority. It is essential that water/wastewater utilities work with their local EM to ensure that their facilities are high on that priority list.

La Plata: Recovery from a Natural Disaster

Bill Eckman, the former mayor of the Town of La Plata, described the response and recovery from the F4 tornado which struck La Plata on April 28, 2002. Mr. Eckman explained the three phases of recovery from a disaster which include:
- Phase 1: Preparation before the disaster occurs
- Phase 2: Immediate Action when it occurs
- Phase 3: Repair, Restoration and Rebuilding after it is over

In the years prior to the 2002 tornado, La Plata had developed several plans for revitalizing the area, which included upgrading and expanding the aging water and wastewater infrastructure. Although funding was not available at the time to make any of these changes, the plan figured prominently in rebuilding after the incident. Impacts to the water sector from the tornado included the destruction of an elevated water tank in town which caused the entire water system to be drained as a result. In addition, power was out across two counties and the pumps at the wells lost power. Southern Maryland Electric Company worked with La Plata to restore service at the wells to get adequate water pressure to the hospital.

La Plata received funding to upgrade both the water system and sewer system in town. This included replacing the destroyed 75,000 gallon elevated water tank with a 750,000 gallon ground level tank with booster pumps, replacing several sewer lift stations, and providing emergency power to the majority of the wells and lift stations.

The main takeaway of Mr. Eckman's presentation was the lesson learned that although La Plata received an immense amount of assistance from towns all over Maryland and the incident was declared a federal disaster, the assistance was not reimbursable because La Plata was not a signatory to mutual aid agreement. That is one of the main benefits from being a signatory to a MAA like MDWARN.

Tabletop Exercise Overview

Will Keefer of HW served as the exercise facilitator and Carl Simons, also of HW, acted as the exercise recorder. The TTX was based on a tropical storm which directly impacts many towns across Maryland. Participants discussed water sector response to the cascading incidents caused by the tropical storm. While the TTX utilized a specific scenario, participants were encouraged to discuss preparedness and response from an all hazards perspective. The background to the tropical storm scenario is described in Appendix D.

Lessons Learned

The following is a summary of the verbal comments made by the exercise participants during the TTX. Comments are not listed in order of priority. When the MDWARN EDT meets to review the AAR, members are encouraged to set priorities for the suggestions, as appropriate.

The TTX scenario was developed through a series of injects that were presented to all the participants simultaneously. The injects were designed to spark discussion relating to the exercise objectives. Mr. Keefer also asked leading questions to facilitate discussion among the participants. A number of discussion topics surfaced repeatedly throughout the exercise:

Preparedness

- MDWARN member utilities should periodically download or print copies of up-to-date member contact lists and resource lists available in case the internet is down during an incident.
- Utilities need to be prepared for weather events which can cause major problems for the water sector. Utilities should know their critical points of failure (e.g., pump stations, lift stations) and have plans to address each.
- A best practice discussed by participating utilities is to start a single work order in their systems to track all work and expenditures during an incident – this is useful later when it comes to potential reimbursement.
- Utilities should regularly review their vendor contracts to ensure that the contractors will be able to meet their obligations during an incident (e.g., debris removal, generators).
- Some utilities have a seat at their local Emergency Operations Center (EOC) during incidents.

- Some utilities send representatives to their Local Emergency Planning Committee (LEPC) meetings to discuss "all-hazards" preparedness in their community.
- Many utilities have discussed family emergency plans with their personnel. During an incident, personnel would be allowed time to ensure that their families are safe before going to work, possibly for extended periods.
- Most water sector utilities have both portable and fixed generators available in the event of a power outage. It is often very hard to locate extra generators during a major incident. In many cases, generators must be acquired from out of state.
- In preparation for a destructive weather event, many utilities have the follow items on their action lists:
    - Perform maintenance on all vehicles and fill up the gas tanks
    - Do an inventory of critical parts/materials and order more resources if needed
    - Test emergency generators and make sure they have enough fuel
    - Order extra treatment chemicals
    - Update staff schedules and prepare for emergency shifts
    - Reduce sludge levels and fill up water tanks

Coordination

- It was discussed that MDWARN can participate in EPA and AWWA conference calls that are held prior to hurricanes and other notice incidents.
- The MDWARN Chair can also organize pre-incident conference calls with MDWARN members to discuss potential needs and resource availability.
    - Steve Gerwin has conference call capability and will organize this.
- After a major incident, MDWARN members would likely contact affected neighboring utilities by phone or by driving there to see if they need any assistance.
- There is mutual interest from MDWARN and MDE to allow MDE to have access to the member's only section of the website.
- Utilities are encouraged to communicate their resource needs and operational status to their local emergency managers. If requests get to the SEOC, the MDE liaison could communicate water sector needs to MDWARN.
    - As the MDWARN Steering Committee doesn't take an active role during an incident, there doesn't appear to be a need to have MDWARN representation at the SEOC.
- MDE provides information to community water systems regarding storm preparation and post storm activities on a yearly basis prior to the hurricane season.
- Utilities should make sure that they work to have a good relationship with local, county, and state emergency management.
- Understanding of MDWARN at local EMAs varies from county to county.
- Many water sector utilities feel like they could improve their relationship with their electricity supplier. It is important that utilities coordinate with their electrical supplier for the priority reestablishment of service to critical facilities.
- Utilities should be part of the "all-hazards" planning in their service areas as there are many interdependencies between the water sector and other sectors in a community.
    - Many smaller utilities do not consider themselves as critical infrastructure, a view that needs to change.

- The water sector needs to educate EM on the importance of water and wastewater utilities, as well as the unique skills and equipment needed to operate the facilities.

Resource Sharing

- Resource requests through MDWARN are from "utility to utility". The steering committee manages the structure that enables this resource requesting (e.g., website, contact lists, resource lists), but doesn't have a role in facilitating resource requests or in emergency response during an incident.
- Utilities are regularly reminded to keep their contact information and resource information up to date.
- Member utilities were reminded that when they loan out resources, they should send personnel that are trained to operate them (e.g., generator with an electrician, backhoe with an operator).
- MDWARN organizes their resources by kind/type, similar to the AWWA Resource Typing Manual (http://www.awwa.org/files/WARN/AWWA%20Resource%20Typing%20Manual%20Final%20-%20April%202,%202008.pdf).
- It doesn't take a major crisis/emergency to activate MDWARN; utilities can activate the agreement for any incident that requires resources beyond what they have on hand.
  - The threshold for what is considered an emergency varies from utility to utility. A smaller community's incident may not be an issue for a larger community.
- Many larger utilities could be able to share resources with smaller utilities during an incident.
- Utilities should have multiple avenues for requesting resources during an incident. Resources could be provided via EM or through mutual aid agreements like MDWARN.
- The resources that utilities would likely need most during an incident include generators and fuel. Most utilities have only a few generators available, which wouldn't be enough to run the entire system.
  - Sources for generators include other utilities, contractors, and EM.
- Utility resource management should include plans for extended incidents that have multiple operational periods, shift changes, and resource replacement.
  - It is critical to ensure that your utility has a plan to bring in additional resources to rotate personnel in and out so they can rest.
- Responding utilities can recall their resources at any time.

Communication

- Many water sector utilities in the state use social media (e.g., Facebook, Twitter) to keep their customers up-to-date with information.
- Both natural and man-made incidents can disrupt normal communication methods, so it is important to have backup methods available.
- Utilities should investigate all communication options available to them and not plan on relying solely on cell phones.

- The state is moving towards using 800 MHz radios which are compatible with other sectors. Many utilities already use these.
- Amateur (also known as ham) radio operators are available through Amateur Radio Emergency Services/Radio Amateur Civil Emergency Services (ARES/RACES) to set up emergency communications.
- Utilities should consider signing up for the Government Emergency Telecommunications Service (GETS) (http://gets.ncs.gov/) and the Wireless Priority Service (WPS) (http://wps.ncs.gov/program_info.html). These two services allow priority calling capability that greatly increases the probability of call completion during a disaster.
- Utilities have multiple options to communicate public notifications in their communities.

Other

- Utilities that have gone through a declared disaster discussed the importance of documenting their incident response so the information can be included in their damage assessments, as they are a critical part of the FEMA reimbursement process. Many utilities set up a job number at the beginning of an incident where all time, labor, and costs are tracked.
- EPA's web tool, Fed FUNDS (http://water.epa.gov/infrastructure/watersecurity/funding/fedfunds/index.cfm), was discussed as a means to learn about appropriate funding opportunities and access damage assessment forms.
- EPA has developed guidance on:
  - Suggested Pre-Hurricane Activities for Water and Wastewater Facilities. http://water.epa.gov/infrastructure/watersecurity/emergencyinfo/pre-hurricane.cfm
  - Suggested Post-Hurricane Activities for Water and Wastewater Facilities. http://water.epa.gov/infrastructure/watersecurity/emergencyinfo/post-hurricane.cfm

Improvement Planning

At the conclusion of the TTX, participants engaged in an improvement planning session led by HW. Participants were organized into small groups and were given discussion topics that were based on issues brought up during the event. The results of the small group discussions will serve as the basis for further developing MDWARN. The EDT, with the assistance of HW and EPA, will conduct follow-up meetings to discuss the improvement planning recommendations. The approximate timing for these meetings is as follows:

3-month Follow-Up Meeting (Conference Call)	*July 2013*
6-month Follow-Up Meeting (Conference Call)	*October 2013*
9-month Follow-Up Meeting (Conference Call)	*December 2013*

Although the calls will be tentatively scheduled for three, six, and nine months after the event, it is up to the WARN to determine whether all three calls are necessary. The coordination calls are designed to assist the WARN with the improvement planning process. Some improvement

planning recommendations may be completed during this nine-month period, while other recommendations may take longer.

The EDT will work together to develop a schedule for implementing improvements. Specific improvement planning objectives and suggestions that will be discussed during these calls include:

1. How to strengthen the relationship with response partners.
   - Discuss the importance of MDWARN with the Maryland Municipal League (MML) and the Maryland Association of Counties (MACo).
   - Provide a MDWARN presentation at a future Maryland Emergency Management Association (MDEMA) conference.
   - Participate in response partner drills and exercises.
2. Increasing the number of smaller utilities in the state that are members of MDWARN.
   - Provide a MDWARN presentation at future MRWA conferences and trainings.
   - Ask current MDWARN members to reach out to non-members in their area.
   - Share the MDWARN FAQ document to dispel any misconceptions about MDWARN.
   - Share EPA document, "Small Water Systems: A Vital Component of WARN" http://www.epa.gov/safewater/watersecurity/pubs/fs_watersecurity_warn_small_systems.pdf.
   - Submit MDWARN-related articles to be included in Operator, Rural Water, or Water Association newsletters.
3. Discuss training and exercises that MDWARN and member utilities should be involved in.
   - Involve MDWARN in the following water association conferences:
     - MRWA trainings and conferences.
     - Tri-Association Conference – the Chesapeake Section, American Water Works Association, Inc. (CSAWWA), Chesapeake Water Environment Association (CWEA) and the Water & Waste Operators Association of Maryland, Delaware & the District of Columbia (WWOA) hold a joint conference.
   - Schedule a MDWARN TTX or communications based exercise.
4. Discuss any improvements that should be considered for the MDWARN website.
   - Is it possible for text message capability to be added for resource requesting?
   - Discuss regular reminders for members to verify their contact information and resources.
5. Discuss MDWARN member communication before, during, and after an incident.
   - Implement periodic WARN meetings and conference calls.
   - MDWARN members will continue to receive situational reports on regional incidents/events through email.
   - Market successful MDWARN activations and resource exchanges after an incident.

Hotwash Comments

At the conclusion of the event, the facilitator asked each participant to offer feedback on the workshop and TTX, including ways to improve their utility's and MDWARN's response to incidents. A summary of comments is presented below (in some instances duplicate comments were combined):

- There is definitely a need for MDWARN in the state and recruiting more members will only enhance the usefulness of the mutual aid network.
- There were some very good discussions during the event.
- The La Plata presentation was very well done and it reinforced the need for being a signatory to a mutual aid agreement.
- This was a great networking event.
- The passive system approach that MDWARN utilizes has worked well so far.
- The discussions gave our utility some ideas of things we should add to our incident preparation checklists.
- This was a great introduction to MDWARN.
- Utilities and local jurisdictions in Maryland have always shared resources during disasters, but MDWARN solidifies informal "handshake" agreements.
- EPA would be happy to help MDWARN get more small system members.
- County Health Department representatives found this to be an informative overview of MDWARN.
- It is important that your entire utility/agency understands MDWARN membership, not just the main contact person.
- It was great to have a variety of response partners from both water sector utilities and local, county, state, and federal agencies in attendance.
- The entire planning process for this event has been beneficial to MDWARN.

At the conclusion of the training day participants were asked to fill out an evaluation form. Of the 35 participants, 17 filled out the forms. Participants rated the overall training using a scale of 1-5 (1=Strongly Disagree, 3=Agree, and 5=Strongly Agree). When asked whether the workshop and TTX was a valuable use of their time, the average score was 4.4. Average scores for the other questions can be found in Appendix A. Written evaluation comments and a detailed compilation of participant evaluations can also be found in Appendix A.

Event Objective Summary

There were several objectives established by the EDT for this workshop and TTX. Following each objective is a summary of how that objective was achieved:

1. Involve MDWARN members and recruit new members.

The event attracted current MDWARN members and several representatives from non-member utilities. For the current members, the event served to reenergize them about MDWARN. For the non-members, this event provided additional information about MDWARN that they could bring back with them to their utilities. Those attendees from other sectors who were initially

unfamiliar about MDWARN stated that they came away more knowledgeable and were interested in promoting membership in their own jurisdictions. There was also a very good discussion regarding how to promote MDWARN membership to smaller utilities (< 10,000 customers served) which make up nearly 94% of all community water systems in Maryland.

2. Strengthen and refine the relationship between MDWARN and emergency management at all levels.

Representatives from both state and county emergency management were in attendance at the event. There were presentations and discussions regarding how the MDWARN mutual aid network complements requests for assistance through EM. MDE provides the link between water sector utilities and the SEOC. With access to the members section of the website, MDE could help make MDWARN members more aware of incidents happening throughout the state.

3. Discuss the resource request process.

The process of how WARN members request resources from other members was discussed in detail. WARN members have access, via the MDWARN website, to the resources available from member utilities. The Steering Committee does not take an active role in the resource request process or in emergency response during an incident. The passive management approach is preferred by MDWARN members. There were discussions regarding whether the Steering Committee can take a more active approach prior to incidents by scheduling conference calls to discuss potential resource needs during an incident.

4. Discuss communications and coordination during an incident.

MDWARN members have access to contact lists and resource lists for all other members. MDWARN members are encouraged to work regularly with their response partners to build relationships that will be beneficial during incidents. Scheduling annual WARN TTXs, potentially communications based, were mentioned as ways to test communication and coordination. The event provided a forum for utilities to discuss a hypothetical incident affecting the water sector that would require resources beyond a utility's/community's capability, highlighting the need for a MAA, such as MDWARN.

5. Verify member contact information.

Steve Gerwin printed out the contact information for all member utilities that is listed on the MDWARN website and passed it around for MDWARN members to review. It was suggested that the list also be circulated by email so that members who couldn't attend have an opportunity to review their information. It was also reiterated that it is important to print out hard copies of this information prior to an incident in case the internet is down.

Overall, this event successfully met the objectives that were defined in advance. The workshop and TTX allowed many of the participants to meet as a group for the first time, evaluate their current capabilities, become more comfortable with each others' roles and responsibilities, and to

identify opportunities for enhancing MDWARN. Additional planning, training, and exercises can ensure that personnel maintain and improve their level of preparedness.

Conclusion

The April 30, 2013, MDWARN Event, which included a workshop and TTX, succeeded in bringing together a number of MDWARN members, non-members, and response partners to achieve the goals set forth by the EDT. Follow-up improvement planning will be instrumental in further developing MDWARN and addressing the objectives that were discussed during the event. Participants agreed that the event was a valuable use of their time. The EPA and HW will be available to assist MDWARN as they work through the improvement planning process.

Appendix A: Evaluation Summary

A total of 17 participants turned in evaluations which are summarized in the following tables.

	Strongly Disagree		Agree		Strongly Agree
	(1	2	3	4	5)
			Average*		
1. The workshop and tabletop exercise (TTX) were well structured and organized.			4.4		
2. The event provided an opportunity to discuss the resource request process during an incident affecting water and wastewater utilities.			4.2		
3. The event provided an opportunity to introduce MDWARN to prospective members.			4.5		
4. The TTX helped strengthen the relationship between MDWARN and all levels of emergency management.			3.5		
5. The event provided an opportunity to reinforce and discuss individual utility preparedness.			4.2		
6. The event provided an opportunity to build relationships between MDWARN members and partner agencies.			4.1		
7. The event provided an opportunity to identify potential gaps in planning at your own agency.			4.4		
8. Overall, the event was a valuable use of my time.			4.4		

MDWARN Event Participant Evaluation Responses (April 2013)

Question 1   **The workshop and Tabletop Exercise (TTX) were well structured and organized.**

1-Strongly Disagree	2	3-Agree	4	5-Strongly Agree
0	0	1	8	8

Question 2   **The event provided an opportunity to discuss the resource request process during an incident affecting water and wastewater utilities.**

1-Strongly Disagree	2	3- Agree	4	5- Strongly Agree
0	0	1	11	5

Question 3   **The event provided an opportunity to introduce MDWARN to prospective members.**

1-Strongly Disagree	2	3- Agree	4	5- Strongly Agree
0	0	1	6	9

Question 4   **The TTX helped strengthen the relationship between MDWARN and all levels of emergency management.**

1-Strongly Disagree	2	3- Agree	4	5- Strongly Agree
0	0	9	5	2

Question 5   **The event provided an opportunity to reinforce and discuss individual utility preparedness.**

1-Strongly Disagree	2	3- Agree	4	5- Strongly Agree
0	0	3	7	7

Question 6   The event provided an opportunity to build relationships between MDWARN members and partner agencies.

1-Strongly Disagree	2	3- Agree	4	5- Strongly Agree
0	0	4	7	6

Question 7	The event provided an opportunity to identify potential gaps in planning at your own agency.				
	1-Strongly Disagree	**2**	**3- Agree**	**4**	**5- Strongly Agree**
	0	0	0	11	6

Question 8	Overall, the seminar and TTX were a valuable use of my time.				
	1-Strongly Disagree	**2**	**3- Agree**	**4**	**5- Strongly Agree**
	0	0	0	11	6

Comments   (Comments are not listed in any priority order.)

1. We need the ability to get pumps/generators from outside of the Baltimore metro area. Some MDWARN activation possibilities: During a drought, we would need a mass distribution of potable water. During large main break, we would need heavy cranes or repair crews.
2. Workshop was a good refresher to storm preparedness.
3. Great job – thought it was a terrific meeting – well done.
4. TTX in the afternoon was too long, too many people left before the end. Bill Eckman was great! Very interesting day.

Appendix B: List of Participants

Count	Name	Title	Agency	Affiliation
1	Douglas R. Abbott	Superintendent, Water & Wastewater Operations	Easton Utilities	Water/Wastewater Utility
2	John R. Allen III	Manager, Environmental Operations	Talbot County Department of Public Works	Local Government
3	Noelle Anuszkiewicz	Acting Utility Administrator	Anne Arundel County Department of Public Works	Water/Wastewater Utility
4	Terry M. Ashenfelter	Program Manager, Safety and Security	Anne Arundel County Department of Public Works	Water/Wastewater Utility
5	Angela J. Ballard-Landers	Community Outreach Coordinator	Washington Suburban Sanitary Commission	Water/Wastewater Utility
6	Jack Bowen	Executive Director	Maryland Rural Water Association	Association
7	Deming Chen	Engineer III	Prince George's County Department of Public Works	Local Government
8	Brian Davis	Acting Strategic Planning Group Leader	Washington Suburban Sanitary Commission	Water/Wastewater Utility
9	Judy Ding	Deputy Director of Utilities	City of Rockville	Water/Wastewater Utility
10	Bill Eckman	Consultant	City of La Plata	Local Government
11	Dennis P. Geary	Plant Engineering Supervisor	Washington Suburban Sanitary Commission	Water/Wastewater Utility
12	Stephen C. Gerwin	Bureau Chief	Howard County Department of Public Works	Water/Wastewater Utility
13	Gary Grey	Operations Support Manager	Washington Suburban Sanitary Commission	Water/Wastewater Utility
14	Gregory S. Harmon	Team Manager	Anne Arundel County	Water/Wastewater Utility
15	Steven M. Harrison	Program Manager	Water Environment Federation	Association
16	Clark Howells	Acting Chief, Environmental Services Division	City of Baltimore	Water/Wastewater Utility

Count	Name	Title	Agency	Affiliation
17	Jerry Irvine	Public Affairs Manager	Washington Suburban Sanitary Commission	Water/Wastewater Utility
18	Ravi Kammila	Manager, Water Pumping	DC Water	Water/Wastewater Utility
19	Bailey Kennett	ORISE Fellow	U.S. Environmental Protection Agency	Federal Government
20	Thomas Kiefer	Chief	Baltimore County – Bureau of Utilities	Water/Wastewater Utilities
21	Kira Lewis	Senior Public Communications Representative	Washington Suburban Sanitary Commission	Water/Wastewater Utility
22	Brendan McCluskey	Director, Preparedness	Maryland Emergency Management Agency	Emergency Management Agency
23	Christopher W. Meyer	Emergency Operations Center Manager	Howard County Office of Emergency Management	Emergency Management Agency
24	J. Daniel Miller	Superintendent	Baltimore County – Bureau of Utilities	Water/Wastewater Utility
25	Bert Nixon	Director, Bureau of Environmental Health	Howard County Health Department	Health Department
26	Robert E. Penman	DEWARN Chair	Artesian Water Company, Inc.	Water/Wastewater Utility
27	Derrick Phillips	Acting Customer Care Team Chief	Washington Suburban Sanitary Commission	Water/Wastewater Utility
28	Brian C. Pickard	Team Leader	U.S. EPA	Federal Government
29	Kris L. Singleton	Emergency Preparedness Liaison	Howard County Department of Public Works	Local Government
30	Mark Tabisz	Management Analyst II	Baltimore County – Bureau of Utilities	Water/Wastewater Utility
31	Phil Vavala	Process Owner – Operations and Restoration	PHI Service Company	Private Industry/Sector
32	David Watts	Utility Administrator	Anne Arundel County	Water/Wastewater Utility

Count	Name	Title	Agency	Affiliation
33	John Y. Whitler	Environmental Protection Specialist	U.S. EPA	Federal Government
34	Alan J. Williams	Program Manager	Maryland Department of the Environment	State Government
35	Neil B. Winner	Chief, Engineering and Technical Assistance Division	Maryland Department of the Environment	State Government

Appendix C: Workshop and TTX Schedule

8:00 a.m. – Check-In / Welcome and Introductions

8:45 a.m. – "Introduction to MDWARN"
         Stephen Gerwin, Howard County Bureau of Utilities

9:30 a.m. – "MRWA Overview"
         Jack Bowen, Maryland Rural Water Association

10:00 a.m. – Break

10:15 a.m. – "MEMA and Emergency Response"
         Brendan McCluskey, Maryland Emergency Management Agency

10:45 a.m. – "MDE Role in the State Emergency Operations Center"
         Alan Williams, Maryland Department of the Environment

11:00 a.m. – "Electrical Mutual Aid and Assistance"
         Phil Vavala, PHI Service Company

11:30 a.m. – "La Plata: Recovery from a Natural Disaster"
         Bill Eckman, Town of La Plata.

12:00 p.m. – Lunch

12:45 p.m. – Tabletop Exercise Overview, Objectives, and Ground Rules

1:00 p.m. – Scenario Discussion

2:15 p.m. – Break

2:30 p.m. – Scenario Discussion

3:30 p.m. – Improvement Planning Session

4:00 p.m. – Hotwash Session

4:15 p.m. – Evaluations and Closing

4:30 p.m. – Adjourn

Appendix D: Tabletop Exercise Synopsis

Scenario Narrative

Date: Saturday, October 1st
Time: 1700 hours

The 2013 hurricane season has been fairly active overall, but no hurricanes have made landfall on the East Coast yet this year.

The National Hurricane Center has been tracking an area of disturbed weather in the eastern Atlantic near the Cape Verde Islands and has named the system Tropical Storm Terry. They are predicting that this system could possibly impact the Eastern Seaboard, but that the system is at least one week away.

Appendix E: Improvement Planning Matrix

MDWARN can use the chart below to identify priority actions/tasks/follow-up requirements and assign responsibilities for each. Improvement planning objectives were identified as result of the discussions during the event and they will be discussed during the improvement planning conference calls which will occur at regular intervals after the event.

Action/Task/ Follow-up	Responsible Individual or Agency	People Who Should Be Involved	Resources and Possible Sources	Short Term Activity	Long Term Activity